Nucleareurope response to the Public Consultation:

Revision of the EU's energy security framework

As highlighted by European Commission President Ursula von der Leyen in her 2025 State of the Union address, the EU needs more clean homegrown energy: both nuclear and renewables. This is what will help shore up security of supply, bring down energy prices and help meet our climate targets.

Energy sovereignty to limit energy dependence

From a security of supply side, energy sovereignty is key. In this respect, the existing fleet of nuclear power plants and the construction of new large reactors will play a key role and this deserves recognition. Furthermore, both the reprocessing and recycling of spent nuclear fuel and advanced nuclear technologies should be recognised in terms of the strategic role which they will play in terms of security of supply and energy sovereignty. For example, some AMRs are expected to reduce the need for fresh uranium given their potential for fully closing the fuel cycle and re-using existing nuclear by-products.

EU energy legislation should focus on supporting clean, homegrown technologies for the production of electricity, heat and hydrogen. This includes overcoming challenges to speed up their deployment in the EU (including support for local supply chains), an investment framework which incentivises private finance and support for electrification in order to stimulate demand for decarbonised energy. This support should remain technology neutral and encompass all clean European technologies (both nuclear and renewables).

Financing: Investing in homegrown technologies to increase production of decarbonised electricity, heat and hydrogen will be key. The key areas which nucleareurope has identified in terms of implementing an enabling framework to encourage investment in existing & new energy infrastructure can be summarised as follows:

- Technology neutral approach to policy.
- Ensuring EU involvement in enabling affordable and accessible financing for nuclear investments.
- Removal of discriminatory articles (nuclear exclusions) from existing EU funds (e.g. European Regional Development Fund, Cohesion Fund and Just Transition Fund).
- Inclusion of nuclear in all funds under the next Multiannual Financial Framework, with appropriate evaluation criteria.
- Increasing the Euratom budget and allocating a much greater share to nuclear fission.

- Leveraging EU financial support – including the European Investment Bank - for the deployment the supply chain in the EU (including components and the nuclear fuel cycle), as well as supporting nuclear skills.
- Streamlining & acceleration of the State Aid process.
- Promoting mechanisms to improve access to capital and introducing new de-risking tools to enhance the attractiveness of nuclear technologies for investors to ensure that new capacity can be deployed in the 2030s.
- Support local energy clusters by providing regulatory and financial support for energy clusters utilising SMRs. Decentralised energy systems improve flexibility and reduce vulnerability to cross-border disruptions.

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Shifting to electrification, heat and hydrogen: Not only is nuclear a sovereign energy source, it is also very versatile as it produces both decarbonised electricity and heat, as well as hydrogen, e-fuels and sustainable aviation fuels (SAF). Encouraging energy intensive sectors (such as industry and transport) to shift towards these decarbonised energy sources will reduce the EU's dependence on fossil fuel imports and render our economy more resilient. This will; in turn; stimulate investment in more clean energy infrastructure in the EU.

The Electrification Action Plan and proposals for an electrification target provide a good starting point. Technology neutral EU polices which support such a switch in transport and industry by providing, for example, access to state aid and other financing mechanisms will help stimulate a shift towards decarbonised electricity, heat and hydrogen. Furthermore, policies which promote either tax benefits or reduce the tax burden on net-zero energy generation will also encourage the move away from fossil fuels.

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Resilience of energy infrastructure: In general, due to the robustness of construction and as a consequence of the high level of safety required, nuclear power plants are highly resilient to climate-related challenges. The nuclear power sector is well adapted to meet extreme weather events. At the same time, given the increasing frequencies of certain weather events due to climate change, and their potential impact on

nuclear facilities, this is an issue which the industry is paying close attention to and in many instances, measures are already being implemented.

Furthermore, given that SMRs/AMRs can be deployed close to, for example, digital infrastructure, they have the potential to enhance resilience against physical and cyber threat. Therefore, these technologies should be recognised as a critical energy infrastructure under the Critical Entities Resilience Directive.

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Diversification: As highlighted under the May 2025 roadmap, the European nuclear industry has already undertaken measures reduce its dependence on Russia. And whilst switching away from Russian nuclear fuels, components, services and radioisotopes will take time to ensure that our security of supply is not put in jeopardy, measures can be taken at EU level to encourage an increase in supply chain capacity in the EU:

- Development of policies, funding and financing mechanisms which will support the ramp up of nuclear supply chain capacity in the EU
- The implementation of a quota system for Russian supplies (effective even after the war of aggression ends) which would quantify the volumes imported from Russia based on a timeline (with a gradual decrease overtime) and give EU producers visibility in terms of what additional capacity will be needed by when.
- Euratom Supply Agency: Proposal to no longer sign new contracts or to prolong existing ones as of a certain date (subject to certain waivers and exemptions to not jeopardise security of supply).
- The implementation of measures to avoid circumvention of Russian supplies via third countries.
- Enable the reprocessing and recycling of spent nuclear fuel by supporting investment in the EU's reprocessing and fuel fabrication supply chain in the EU.

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